

A CASE  
OF  
ANEURISM OF THE CAROTID ARTERY.

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SURGEON TO GUY'S HOSPITAL.

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*Read Jan. 29, 1806.*

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MARY EDWARDS, aged 44, was brought to my house by Mr. Robert Pugh, of Gracechurch-street, that I might examine a tumor in the neck, which was obviously an Aneurism of the right Carotid Artery. I advised her to become a patient in Guy's Hospital, and she was admitted on the 23d of October, 1805. The account she gave of the disease was, that the tumor appeared five months before, situated rather above the middle of the neck; its size at first being only that of the end of the finger; that it beat with very great force, and occasioned a strong pulsation in the brain; that it gradually increased upwards, until it reached the lower jaw, and extended downwards below the middle of the neck; that for

a fortnight previous to her admission, the pulsation in it and in the brain had been so strong as to prevent her sleeping; that the scalp on that side was tender, so as scarcely to bear the touch; that she had great difficulty in taking any solid food, and was constantly teased with a violent cough.

Upon examination of the swelling I found that it occupied two-thirds of the neck; it had a very strong pulsatory motion, and the skin was thin at its most prominent part. When the swelling was examined at the hospital, great doubts were entertained if there was sufficient space between the clavicle and the tumor for the application of a ligature, and as her husband objected to the operation, she quitted the hospital.

In a few days, hearing that all her symptoms were increased, I called at her house, and strongly pointing out the probability of a fatal termination of the disease, I gained her consent and that of her relations to an operation.

On Friday, Nov. 1st, 1805, the operation was performed, in the presence of Mr. Pearce, Surgeon, and Mr. Owen, Apothecary to the Universal Dispensary, Ratcliffe Highway, of Mr. Travers, Surgeon, and that of five other Medical Gentlemen.

The tumor at this time reached from near the chin beyond the angle of the jaw, and extended

downward to within  $2\frac{1}{2}$  inches of the clavicle. I made an incision two inches long, on the inner edge of the sterno-mastoid muscle, from the lower part of the tumor to the clavicle, which laid bare the omo- and sterno-hyoideus muscles, which being drawn aside towards the trachea, exposed the jugular vein. The motion of this vein produced the only difficulty in the operation, as under the different states of breathing it sometimes presented itself to the knife, tense, and distended, and then as suddenly collapsed. Passing my finger into the wound to confine that vein, I made an incision upon the carotid artery, and having it laid bare, I separated it from the par vagum, and introduced a curved aneurismal needle under it, taking care to exclude the recurrent nerve on the one hand, and the par vagum on the other. The two threads were then tied about half an inch asunder, being the greatest distance to which they could be separated; I thought it proper not to run the risk of a hæmorrhage by dividing the artery, as I was fearful the ligatures would be thrown off by the force of the heart, and the distance was too small to allow of any means being used to prevent it. As soon as the threads were tied, all pulsation in the tumor ceased, and the operation being concluded, and the wound superficially dressed, she rose from the chair in which she sat during the operation, and was immediately seized with a fit of coughing, which I thought would have terminated her existence. This seemed to arise from an accumulation of mucus in the trachea, which she could

not expel; it continued about half an hour when she became more tranquil.

*Saturday, Nov. 2.* — Mr. Owen, who had sat up with her, reported that she had slept six hours during the night, but was now and then disturbed by her cough. The pulsation in the tumor has not returned; that in the brain has ceased, and there is no appearance of diminution of nervous energy in any part of the body.

*Sunday, Nov. 3.* — Last night as she had some pain in her head, leeches were applied. To-day the pain in her head is gone; her cough is less troublesome; her stools and urine are natural; pulse 96.

*Monday, Nov. 4.* — Slept six hours last night; her spirits are good; pulse 100.

*Tuesday, Nov. 5.* — In the afternoon, I found her, as may be supposed contrary to my orders, sitting before the fire with three other persons, drinking tea, which she swallowed with great difficulty; she had no pain in her head; her pulse 96, and the only circumstance of which she complains, is that her cough is troublesome.

*Wednesday, Nov. 6.* — In a violent fit of coughing last night, a slight discharge of venous blood took place from the wound. Mr. Hopkie, of Ratcliffe Highway, was called to her; but the bleeding ceased

with the cough, and a piece of lint was laid lightly on the wound ; in the afternoon her cough was less troublesome ; her pulse only 92.

*Thursday, Nov. 7.* — My colleague, Mr. Forster, accompanied me to see her and to make a drawing of the tumor, which he thought was reduced one-third. She slept eight hours last night ; her pulse 94.

*Friday, Nov. 8.* — Evening ; I was sent for by Mr. Owen and Mr. Roberts, who alternately sat up with her, on account of their observing, that her left arm and leg were paralytic. I found them benumbed, and she moved them with great difficulty ; but as her pulse was weak, and she laboured under considerable constitutional irritation, I thought the powers of these parts would be restored as her health improved. She had passed a very restless night, complaining that her bones were sore, and that her teeth felt as if softened. Her head is free from pain.

*Saturday, Nov. 9.* — Her cough is less troublesome ; her pulse is 90 ; her spirits good ; she talks with cheerfulness, and moves her arm with more facility than yesterday. She slept eight hours last night ; she said she must have something to eat ; but upon attempting to swallow solids she was incapable of doing so. She has no pain either in the head or tumor, but says, when she coughs she feels a pricking pain in the wound.

*Sunday, Nov. 10.* — I did not see her.

*Monday, Nov. 11.* — She had passed a good night; her left arm she now moves with more facility, but I thought with not quite so much ease as the other. She is in good spirits, and has some appetite, but cannot swallow solids. Her chief sustenance is arrow root, to which, as she had been very much accustomed to take spirits, a little wine is added. — Her cough is sometimes very violent; her pulse is only 84; the ligatures are projecting further from the wound, than at any time since the operation.

*Tuesday, Nov. 12.* — My colleague, Mr. Lucas, accompanied me to see the woman, this day. We found her in good spirits, and the pulse only 82, her cough less troublesome, and she was able to sit up and use her arm with so much facility, that it required that the attention should be particularly directed to the part, to discover any difference in the powers of the two arms.

When the dressings were removed, the ligatures were drawn from the wound, including the intervening portion of artery. The edges of the wound were then brought together by adhesive plaster.

*Wednesday, Nov. 13.* — Her cough is less troublesome; she swallows liquids with more ease. The only complaint she makes is of a pain in the back, of which she was relieved by a dose of *magnesia vitriolata*.

*Thursday, Nov. 14.* — She slept eight hours last night, and her state is in every respect improved; she swallows with less difficulty; the tumor is reducing in size, and is entirely unattended with pain. As I now considered her out of danger I did not visit her on Friday or Saturday; but Mr. Jones, one of my house-pupils, visited her and found the wound nearly closed.

*Sunday, Nov. 17.* — I was much dissatisfied to find her labouring under a high degree of constitutional irritation; the tumor was also increased and very sore upon pressure; the wound was as large as immediately after the operation, and discharged a sanious serum; she complained of a great difficulty in swallowing, and of a most distressing cough, after the fits, of which she hooped violently; her pulse 96; and her left arm again weaker than the other.

*Monday, Nov. 18.* — She had passed a restless night; complains of pain in her head, and the size of the tumor has increased; there is great soreness upon the neck, when it is pressed; the pulse is quick, and the tongue is furred.

*Tuesday, Nov. 19.* — Her pulse is very quick; she had no sleep last night, although she took forty drops of tincture of opium; the tumor is still more increased, and the skin over it of a brownish red colour.

*Wednesday, Nov. 20.* — She had slept three hours last night ; her pulse is 108, and small ; she is unable to swallow even her saliva, which constantly dribbles from her mouth and every attempt at deglutition ; produces a violent cough.

*Evening.* — Her pulse 120 ; she is in a profuse sweat ; and still unable to swallow.

*Thursday, Nov. 21.* — She died.

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### DISSECTION.

The aneurismal sac was found inflamed, and around the clot of blood which it contained, there was a considerable quantity of pus.

The inflammation extended on the outside of the sac along the par vagum, nearly to the basis of the skull.

The glottis was almost closed, and the internal surface of the trachea was inflamed, coagulating lymph adhering to its mucous membrane.

The sudden increase which the parts had undergone from inflammation, added to the size of the



tumor previous to the operation, had occasioned so much pressure upon the pharynx, that it would not easily admit a bougie of the size of a goose quill.

The nerves, as may be seen, sustained no injury, the ligature having passed between the recurrent and the artery on the one hand, and the par vagum on the other.

The cause of her death then, was the inflammation of the aneurismal sac and the parts adjacent, by which the size of the tumor became increased so as to press on the pharynx and prevent deglutition, and upon the larynx, so as to excite violent fits of coughing, and ultimately to impede respiration.

A similar event, however, may be in future prevented, by performing the operation when the tumor is small, and pressure has not been made by it upon important parts, or if it is of considerable size, as in this case, by opening the tumor and discharging the coagulum, as soon as inflammation appears.\*

As I could not obtain permission to open the head, the cause of the paralysis remains unknown. It did not immediately succeed the operation, but was observed first on the eighth day after it. It

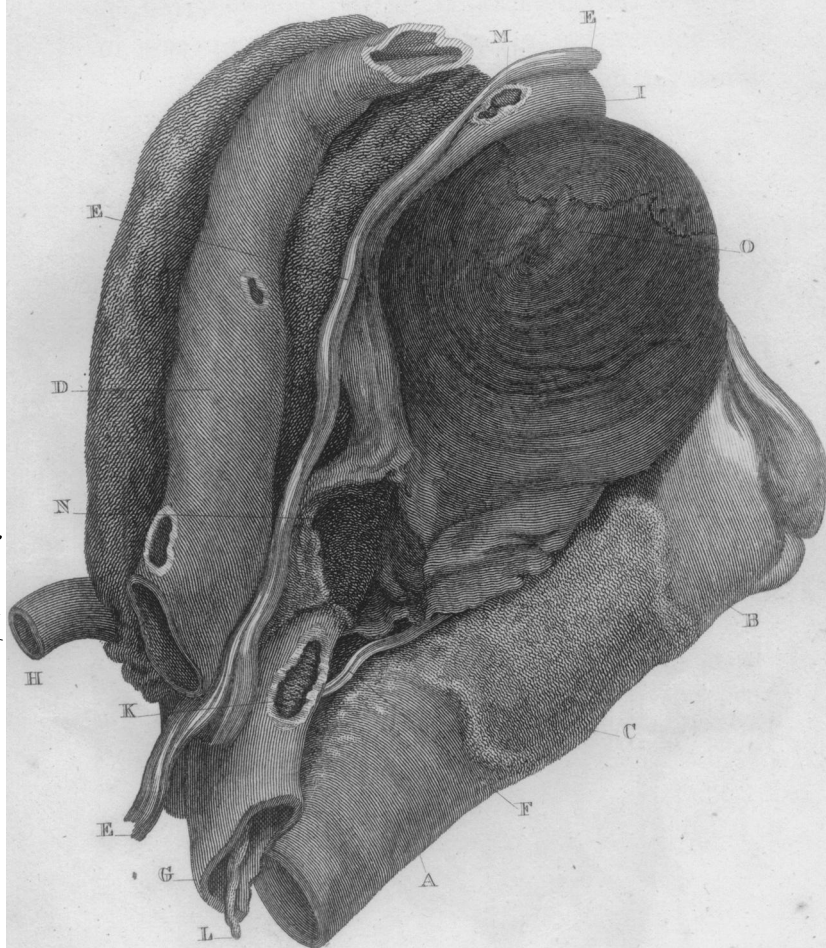
\* Since this paper was read to the Society, another case has occurred which has terminated successfully and will be given at the end of this volume.

came on while she laboured under great constitutional irritation, lessened as it decreased, and returned when the irritation became greater ; but as it appeared that the irritation which she suffered was owing to the operation being too long deferred, it will not prevent my performing it in any case in which the disease is somewhat less advanced.

It appears that no objection can be made to this operation on account of any unusual danger of bleeding at the time the ligatures separate, since, although they were discharged from the wound on the twelfth day, and they were certainly separated from the artery on the eleventh, the ulcerated extremity of the vessel had been closed by the adhesive process and by a clot of blood which adhered strongly to its coats. Hence we may conclude, therefore, that the carotid artery may be, in this respect, as safely tied as any other artery in the body.\*

\* It gives me pleasure to find, that the carotid artery has been since successfully tied by my friend, Mr. Travers. See *Medico-Chirurgical Transactions*, vol. II. page 1.

Fig. 1.



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## EXPLANATION OF THE PLATES.

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### PLATE THE FIRST.

#### *FIG. I.*

- A. Trachea.
- B. Larynx.
- C. Larynx inflamed and ulcerated.
- D. Jugular vein.
- EE. Par Vagum.
- F. Recurrent Nerve.
- G. Arteria Innominata.
- H. Right Subclavian Artery.
- I. Carotid Artery above the tumor.
- K. Carotid Artery, with a portion of it removed to shew the clot within it.
- L. The Clot continued within the Arteria Innominata.
- M. Clot in the Artery above the tumor.
- N. The ulcerated Artery, where the ligature had been applied.

PLATE THE SECOND.

*FIG. I.*

- A. Trachea.
- B. Epiglottis.
- C. Œsophagus.
- D. Pharynx; contracted by the pressure of the tumor.
- E. Arteria Innominata.
- F. Right Subclavian Artery.
- G. Par Vagum.
- H. Recurrent Nerve.
- I. Phrenic Nerve.
- K. Aneurismal Sac.
- L. Coagulum in the Aneurismal Sac.

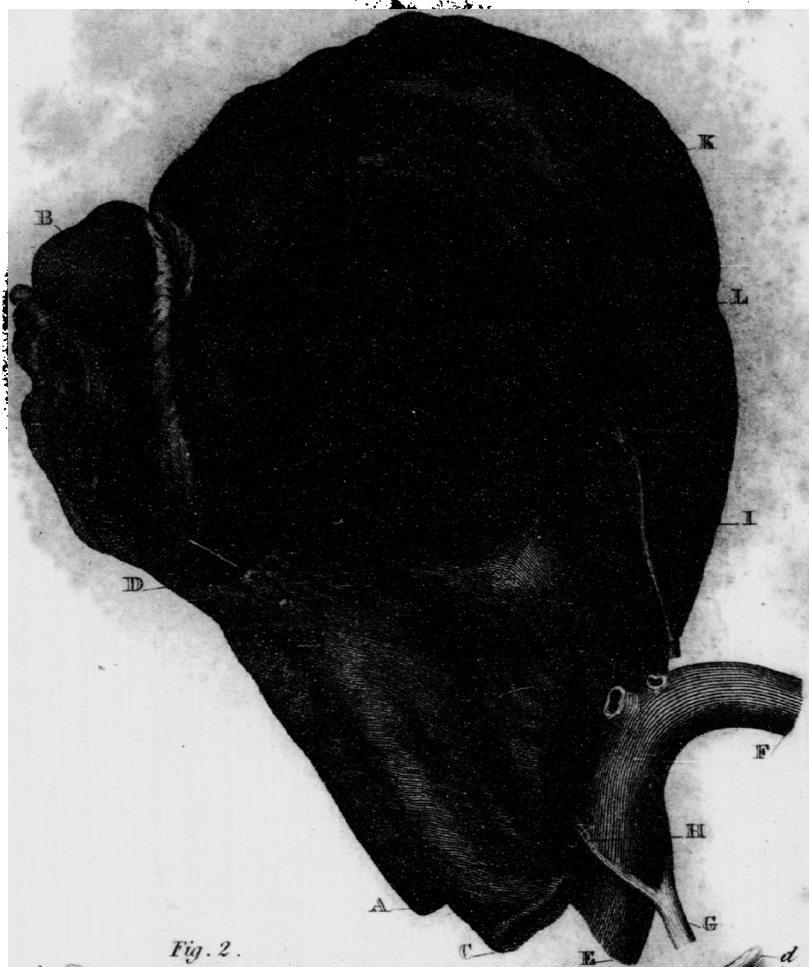
*FIG. II.*

I have added to this plate a view of a Carotid Artery which had been obliterated by pressure. It was taken from a man who died in Guy's Hospital with an Aneurism in the Curvature of the Aorta. — The disease passed into the neck behind the Sternum, and reached as high as the side of the Larynx, producing great difficulty in deglutition and breathing. His mind continued perfect till his dissolution, and he had no paralytic symptoms. On examination, the left Carotid Artery was found obliterated as far as its division into external and internal.

- A. The Common Carotid. B. External Carotid.
- C. Internal Carotid. D. Par Vagum.
- E. The clot adhering to the inner coat of the artery.

Dr. Baillie has described a curious case of obliteration of this Artery, in the "Transactions of a Society for the Encouragement of Medical and Chirurgical Knowledge."

*Fig. 1.*



*Fig. 2.*

